In the Claims

1. (Original) A method for detecting silent failures in a system, comprising the steps of:

identifying an operational signature of said system, said operational signature being representative of the system when it is operating properly;

obtaining samples of operational service measurements;

comparing said samples with said operational signature; and

performing a corrective measure if said comparison of said samples with said operational signature indicates the probability of a silent failure of said system.

2. (Original) The method of claim 1, wherein said system comprises a processing system having at least one Active Unit (AU) and at least one Standby Unit (SU), and wherein said step of performing a corrective measure comprises at least the steps of:

automatically activating said at least one SU if said comparison indicates that a silent failure has occurred with respect to said at least one AU.

3. (Original) The method of claim 2, wherein said step of performing said corrective measure further comprises at least the step of:

automatically initiating an alert indicating that a silent failure of said system is probable.

4. (Original) The method of claim 3, wherein said alert process comprises automatically communicating with a technician electronically.

5. (Original) The method of claim 1, wherein said identifying step comprises at least the steps of:

monitoring said system during an index period to obtain a set of index service measurements;

evaluating said index service measurements and determining said operational signature based on said index service measurements.

6. (Original) The method of claim 5, wherein said identifying step is instituted during a period when said system is actively online.

7. (Original) The method of claim 5, wherein said identifying step is instituted during a period when said system is not actively online.

8. (Original) The method of claim 7, wherein said index service measurements are updated at predetermined times to incorporate said operational service measurements therein.

9. (Original) The method of claim 1, wherein said system comprises a telecommunications system that includes a call processing function, said operational characteristics comprising:

call requests; and

successful call requests.

10. (Original) The method of claim 1, wherein said system comprises a telecommunications system that includes a mobility function, said operational characteristics comprising:

attempted handovers;

successful handovers; and

paging requests.

11. (Original) A system for detecting silent failures in a system, comprising:

means for identifying an operational signature of said system, said operational signature being representative of the system when it is operating properly;

means for obtaining samples of operational service measurements;

means for comparing said samples with said operational signature; and

means for performing a corrective measure if said comparison of said samples with said operational signature indicates the probability of a silent failure of said system.

12. (Currently amended) The system of claim 11, wherein said system comprises a processing system having at least one Active Unit (AU) and at least one Standby Unit (SU), and wherein said ~~step~~ means of performing a corrective measure comprises:

means for automatically activating said at least one SU if said comparison indicates that a

silent failure has occurred with respect to said at least one AU.

13. (Currently amended) The system of claim 12, wherein said ~~step~~ means of performing said corrective measure further comprises:

means for automatically initiating an alert indicating that a silent failure of said system is probable.

14. (Original) The system of claim 13, wherein said alert process comprises means for automatically communicating with a technician electronically.

15. (Currently amended) The system of claim 11, wherein said identifying ~~step~~ means comprises:

means for monitoring said system during an index period to obtain a set of index service measurements;

means for evaluating said index service measurements and determining said operational signature based on said index service measurements.

16. (Currently amended) The system of claim 15, wherein said identifying ~~step~~ means is instituted during a period when said system is actively online.

17. (Currently amended) The system of claim 15, wherein said identifying ~~step~~ means is

instituted during a period when said system is not actively online.

18. (Original) The system of claim 17, wherein said index service measurements are updated at predetermined times to incorporate said operational service measurements therein.

19. (Currently amended) The system of claim 11, wherein said comparing ~~step~~ means is performed using hypothesis testing.

20. (Currently amended) The system of claim 11, wherein said comparison ~~step~~ means is performed using change-point detection.

21. (Currently amended) A machine-readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a machine, cause the machine to perform detection of ~~computer program product recorded on computer readable medium for detecting~~ silent failures in a system using subsets of instructions, comprising:

a first subset of instructions ~~computer readable means~~ for ~~means for~~ identifying an operational signature of said system, said operational signature being representative of the system when it is operating properly;

a second subset of instructions ~~computer readable means~~ for ~~means for~~ obtaining samples of operational service measurements;

a third subset of instructions ~~computer readable means~~ for ~~means for~~ comparing said samples with said operational signature; and

a fourth subset of instructions ~~computer readable means~~ for ~~means for~~ performing a corrective measure if said comparison of said samples with said operational signature indicates the probability of a silent failure of said system.

22. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 21, wherein said machine-~~computer~~ readable medium ~~system means~~ comprises a processing system having at least one Active Unit (AU) and at least one Standby Unit (SU), and wherein said fourth subset of instructions ~~step of performing a corrective measure~~ comprises:

a fifth subset of instructions ~~computer readable means~~ for automatically activating said at least one SU if said comparison indicates that a silent failure has occurred with respect to said at least one AU.

23. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 22, wherein said fourth subset of instructions ~~step of performing said corrective measure~~ further comprises:

a sixth subset of instructions ~~computer readable means~~ for automatically initiating an alert indicating that a silent failure of said system is probable.

24. (Currently amended) The machine-readable medium ~~computer program product~~ of

claim 23, wherein said sixth subset of instructions ~~alert process~~ comprises a seventh subset of instructions ~~computer readable means~~ for automatically communicating with a technician electronically.

25. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 21, wherein said first subset of instructions ~~identifying step~~ comprises:

a fifth subset of instructions ~~computer readable means~~ for monitoring said system during an index period to obtain a set of index service measurements;

a sixth subset of instructions ~~computer readable means~~ for evaluating said index service measurements and determining said operational signature based on said index service measurements.

26. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 25, wherein said first subset of instructions ~~identifying step~~ is instituted during a period when said system is actively online.

27. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 25, wherein said first subset of instructions ~~identifying step~~ is instituted during a period when said system is not actively online.

28. (Currently amended) The machine-readable medium ~~computer program product~~ of

claim 27, wherein said index service measurements are updated at predetermined times to incorporate said operational service measurements therein.

29. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 21, wherein said third subset of instructions ~~comparing step~~ is performed using hypothesis testing.

30. (Currently amended) The machine-readable medium ~~computer program product~~ of claim 21, wherein said third subset of instructions ~~comparison step~~ is performed using change-point detection.